

**THAT WHICH IS CLAIMED IS:**

1. A microelectromechanical structure comprising:
  - a ceramic substrate;
  - a low loss photodefinable dielectric
  - 5 planarizing layer formed over the ceramic substrate;
  - and
  - a photodefined conductor printed in a position over the low loss dielectric planarizing layer and formed into a structural circuit component.
2. A microelectromechanical structure according to Claim 1, and further comprising a sacrificial layer over said low loss photodefinable dielectric planarizing layer and formed with the
- 5 photodefined conductor into a structural circuit component.
3. A microelectromechanical structure according to Claim 1, wherein said low loss photodefinable dielectric planarizing layer is formed as a sacrificial layer.
4. A microelectromechanical structure according to Claim 1, wherein said photodefined conductor member is formed as a switch and further comprises a deflectable member that is movable into
- 5 open and closed circuit positions.
5. A microelectromechanical structure according to Claim 4, wherein said deflectable member is formed as a cantilever beam.

6. A microelectromechanical structure according to Claim 4, wherein said deflectable member is formed as a suspended beam.

7. A microelectromechanical structure according to Claim 1, wherein said photodefined conductor further comprises an input signal line and output signal line that transfer current.

8. A microelectromechanical structure according to Claim 1, wherein said photodefined conductor comprises a thick film conductor.

9. A microelectromechanical structure according to Claim 1, wherein said low loss photodefinable dielectric planarizing layer is formed from a borosilicate based thick film dielectric  
5 material.

10. A microelectromechanical structure according to Claim 1, wherein said photodefinable dielectric planarizing layer has a dielectric constant of about 3.8 to about 4.2.

11. A microelectromechanical structure according to Claim 1, wherein said photodefinable dielectric planarizing layer has a loss factor of about 0.01%.

12. A microelectromechanical according to Claim 1, wherein said ceramic substrate is formed from ceramic sheets that are stacked and co-fired together.

13. A radio frequency switch circuit comprising:

- a radio frequency input;
- a control input;
- 5 a radio frequency output; and
- a microelectromechanical switch connected to said radio frequency input and output and control input and comprising
  - a ceramic substrate;
  - 10 a low loss photodefinable dielectric planarizing layer formed over the ceramic substrate;
  - a photodefined conductor printed over the low loss dielectric planarizing layer and
  - 15 formed into a switch, and further comprising a biasing actuator connected to said control input, and a deflectable member formed over the biasing actuator and movable into a closed circuit position upon actuation of
  - 20 said control input and operatively connected to said radio frequency input and output when in the closed circuit position.

14. A microelectromechanical structure according to Claim 13, and further comprising a sacrificial layer formed over said low loss photodefinable dielectric layer and formed with the

5 photodefined conductor into a structural circuit component.

15. A microelectromechanical structure according to Claim 13, wherein said low loss photodefinable dielectric planarizing layer is formed as a sacrificial layer.

16. A radio frequency switch circuit according to Claim 13, wherein said deflectable member is formed as a cantilever beam.

17. A radio frequency switch circuit according to Claim 13, wherein said deflectable member is formed as a suspended beam.

18. A radio frequency switch circuit according to Claim 13, wherein said photodefined conductor further comprises an input signal line connected to said radio frequency input and output  
5 signal line connected to said radio frequency output that transfer current when said switch is in the closed position.

19. A radio frequency switch circuit according to Claim 13, wherein said photodefined conductor comprises a thick film conductor.

20. A radio frequency switch circuit according to Claim 13, wherein said low loss photodefinable dielectric planarizing layer is formed from a borosilicate based thick film dielectric  
5 material.

21. A radio frequency switch circuit according to Claim 13, wherein said photodefinable dielectric planarizing layer has a dielectric constant of about 3.8 to about 4.2.

22. A radio frequency switch circuit according to Claim 13, wherein said photodefinable dielectric planarizing layer has a loss factor of about 0.01%.

23. A radio frequency switch circuit according to Claim 13, wherein said ceramic substrate is formed from ceramic sheets that are stacked and co-fired together.

24. A radio frequency switch circuit according to Claim 13, wherein said control input further comprises a transistor.

25. A method of forming a microelectromechanical structure comprising the steps of:

- forming a ceramic substrate;
- 5        forming a low loss photodefinable dielectric planarizing layer over the ceramic substrate; and
- forming a structural circuit component from at least the photodefined conductor.

26. A method according to Claim 25, and further comprising the step of forming the planarizing layer as a sacrificial layer and removing part of the planarizing layer to form the structural component.

27. A method according to Claim 25, and further comprising the step of forming a sacrificial layer over the planarizing layer that is at least partially removed to form the structural component.

28. A method according to Claim 25, and further comprising the step of forming the ceramic substrate from ceramic sheets that are stacked and co-fired together.

29. A method according to Claim 25, and further comprising the step of forming the photodefined

conductor member as a switch having deflectable member and movable into open and closed circuit positions.

30. A method according to Claim 29, and further comprising the step of forming the deflectable member as a cantilever beam.

31. A method according to Claim 29, and further comprising the step of forming the deflectable member as a suspended beam.

32.. A method according to Claim 29, and further comprising the step of forming an input signal line and output signal line that transfer current when said switch is in the closed position.

33. A method according to Claim 25, and further comprising the step of forming the photodefined conductor member as a thick film conductor.

34. A method according to Claim 25, and further comprising the step of forming the low loss photodefinable dielectric planarizing layer as a borosilicate based thick film dielectric material.

36. A method according to Claim 25, wherein the photodefinable dielectric planarizing layer has a dielectric constant of about 3.8 to about 4.2.

37. A method according to Claim 25, wherein said photodefinable dielectric planarizing layer has a loss factor of about 0.01%.